

# Tian Pretorius

## Software Engineer



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☎ (+27) 76 141 6214

📍 Hilton, South Africa

🔗 Personal Portfolio

🌐 LinkedIn Profile

## EDUCATION AND QUALIFICATIONS

### Bachelor of Engineering

North West University

01/2013 – 12/2016

Potchefstroom, South Africa

- Electronics, Embedded Systems, Programming, Data Analytics
- Hardware–Software–IoT Integration
- Automation & Data-Driven Solutions

### Matric

Voortrekker Highschool

01/2008 – 12/2012

Pietermaritzburg, South Africa

- Strong foundation in Mathematics, Science & Technology

## PROFILE

Computer Engineer with 6+ years of experience in systems design, automation, and technical leadership. Excels at optimizing processes, delivering innovative solutions, and leading cross-functional projects. Focused on creating scalable systems, improving efficiency, and bridging technical ideas with practical outcomes.

## WORK EXPERIENCE

### Chief Technical Officer

Vandenburg (Pty) Ltd

03/2025 – 09/2025 | Hilton, South Africa

#### Key Contributions:

- Spearheaded vitamin premix development and production optimisation; led global fortification consultations; managed sourcing operations for efficiency gains.

#### Achievements:

- Increased production efficiency; expanded international project reach; achieved measurable cost reductions through optimised sourcing.

#### Tools Used:

- Python; JavaScript (Node.js); Django; PostgreSQL; Docker; Git; Linux; CI/CD; Inventory, CRM & Procurement Systems; Analytics & Collaboration Platforms.

### Computer Engineer/Solutions Engineer

Millhouse International (PTY) Ltd

06/2020 – 03/2025 | Hilton

#### Key Contributions:

- Designed automation systems for fortification processes; implemented data monitoring for compliance; provided R&D and prototype support.

#### Achievements:

- Automated production processes; improved compliance reporting accuracy; developed tools that enhanced operational efficiency.

#### Tools Used:

- Python; JavaScript (Node.js); Django; PostgreSQL; Docker; Git; Linux; CI/CD; Equipment Automation & Embedded Systems; Data Monitoring & Calibration Tools.

### Lead Engineer

InnovateX (PTY) Ltd

11/2019 – 03/2025 | Hilton

#### Key Contributions:

- Developed computer-vision algorithms for Vitamin A detection; built web/mobile prototypes for data capture and visualisation; designed experimental protocols for detection calibration.

## SKILLS

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System Design & Development

Problem Solving

Technical Documentation

Data Analysis & Interpretation

Programming (Python, Java, C#, etc)

Web Development

Linux

Cross-functional Collaboration

Research & Development

## INTERESTS

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### Information Security and Hackathons

Cybersecurity, coding challenges, problem-solving.

### Robotics and Electronics Projects

Building and programming hardware/software systems.

### Science and Technology

Exploring emerging tech and innovations.

### Health and Fitness Science

Studying performance, nutrition, and wellness.

### Sport

Active, team-oriented, disciplined.

### Achievements:

- Delivered proof-of-concept for accurate detection; defined optical and physical requirements for reliable measurement; translated lab research into scalable industrial workflows.

### Tools Used:

- Python; OpenCV; Image Processing & Statistical Analysis; Web/Mobile Stack; Git; Data Visualisation & Calibration Tools.

### Post-Graduate Researcher

North West University

01/2017 – 06/2019 | Potchefstroom, South Africa

### Key Contributions:

- Conducted research on RFID technology adoption and industrial barriers; designed Bluetooth-controlled RFID hardware prototypes and full web/mobile software systems; collaborated with industry partners to align academic research with real-world use.

### Achievements:

- Authored technical documentation for hardware and software protocols; bridged theoretical research with industrial applications; advanced toward a Master's in Computer & Electronic Engineering (paused, with intent to complete).

### Tools Used:

- Python; C/C++; Embedded Systems; RFID & Bluetooth Integration; Web/Mobile Application Development; Data Analysis; Software Architecture & Security Protocols.

## LANGUAGES

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English | Afrikaans

## CERTIFICATIONS

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CCNA (Cisco Certified Network Associate)

SolidWorks Certified Associate

Linux Essentials Professional Development Certificate

Occupational Health and Safety in the Workplace

## REFERENCES

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- References available upon request